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AUTHOR Rogers, Don
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ABSTRACT

The project reported in this paper reflects an effort to establish an audit plan which can serve as a basis for discussion and which may evolve into a useful research tool for studying the internal information diffusion system of a complex organization. A mass communication model, modified from Harold D. Lasswell, was adopted to represent the key variables of the information diffusion audit. The project was limited to complex organizations because their complexity determines the effectiveness of the information system and they have both the resources available to determine objectives and the structure for achieving these objectives. (RB)

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AN AUDIT PLAN FOR THE INTERNAL INFORMATION DIFFUSION SYSTEM OF A COMPLEX ORGANIZATION

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DON ROGERS
Dept. of Speech Communication
State University of N.Y. at Buffalo

CS 500 732

The project reported reflects an effort to establish an audit plan which can serve as a basis for discussion and which may evolve into a useful research tool for studying one type of communicative behavior within the context of an organization.

1. This paper presents an audit plan for the internal information diffusion system of a complex organization.

1.1. Audit Plan. The project describes an audit plan because this device represents a research tool integrating field study (in the organization) with quantitative evaluation of the findings (variance analysis).

1.2. Internal. The project is restricted to an internal system because (1) this type of information system is most subject to organizational control (2) this allows the population of potential users to be easily determined, (boundary questions become truly academic) and (3) this system would already possess communication channels (informal as well formal) which could be examined.

1.3. Information Diffusion System. This is an aggregate of interrelated elements comprising a unified process of distributing or disseminating data that is meaningful from the user's viewpoint. The focus of this system is on the use that the receiver will make of information.

1.4. Complex Organization. The project is limited to complex organizations because (1) the complexity of the organizational structure will determine effectiveness of the information system, (2) the complex organization would have the resources available to determine its objectives, and (3) the complex organization would have the structure for reaching its objectives.

2. Purpose. The purpose of this audit is to provide a structure and set of concepts for both the practical and theoretical analysis of an organization.

2.1. Intervention. As the process of intervention into complex organization becomes more sophisticated, new and better tools for analyzing the organization will become necessary. The goal of any intervention is to help the client system to better achieve its objectives, but a tool is necessary to determine how well the objectives are currently being met. The client system may realize that it has problems but without some systematic approach, the client system will not be able to identify problems for treatment.

2.2. Logic Systems. The logic systems currently available for organizational analysis are generally adapted to simple, organized problems (formal logic), simple disorganized problems (multiple equations), and complex disorganized problems (statistics). The problems of the complex organization, however, are both complex and organized. These problems require a logic system that is both complex (the audit uses quantification to deal with complexity) and organized (the field study can determine the nature of the relationships governing the organization).

2.3. Research. The primary goal (eventually) of this project is to develop a research protocol for studying information diffusion. The methodology would be field study and the analysis, mathematical.

2.31. Operating Research. The first use of such a research protocol would be to help the organization to improve its activities for achieving its goals. To this end, the audit would generate data concerning (1) current contributions to objectives, (2) problem areas, and (3) possible solutions

to problems.

2.32. Basic Research. Although I (the author) do not like the word basic in this context, I have no other word to describe the concept. The audit, in this instance, would be used to gather information about the organization in order to improve our theories about the operation of organizations. Thus, the audit could contribute both to practitioners and theorists.

3. The Model. In order to have some kind of a control element for this project a model of the key variables is desirable.

3.1. Model Requirements. The type of model for this project must be essentially a process model, concerning the relationships among variables. The audit model for accounting was examined, but rejected because it concentrates too much on valuation. The audit model for management audits was also examined and rejected, because the model concentrated almost entirely on subjective measurements (replication of any study using the model would be next to impossible).

3.2. Model Used. A mass communication model, modified from Lasswell, was adopted to represent the key variables of the information diffusion audit. This model appears in Figure 1.

Figure 1.
AUDIT MODEL

WHO
gets WHAT information
WHEN
through what MEDIA
in what FORMAT
from WHOM
with what EFFECT?

Who refers to the user of information. What refers to content. When refers to timing. Media refers to the channel through which the information is transmitted. Format refers to the general composition or style in which the information is transmitted. Whom refers to the source of information. And Effect refers to the results or end product of the information.

4. Elements of the Technical Evaluation. This section refers to the hardware requirements of the system. The focus of the technical evaluation is on those factors which are essential to any information system, independent of the context of the system.

4.1. Input. Any information system must have input of data. The system may generate its own data or it may draw data form its environment, but data must be input before information can be developed.

4.2. Storage. Once the data has been input, the data must be stored until they are used. Storage may take a variety of physical forms ranging from a man's memory to a file of magnetic computer tapes.

4.3. Processing. The data must be processed or interpreted in some way in order to become useful. Processing may range from individual value judgements to statistical manipulation.

4.4. Control. The system must have controls to insure that data to be processed are accessable from storage, and to insure that the programs (not necessarily computer type, but that is the allusion) for processing procede as planned.

4.5. Output. Finally, any system must have an output of the processed data.

5. Elements of the Objectives Evaluation. This section refers to the software requirements of the information diffusion system. These are the elements that will be determined according to the specific organization. These elements reflect subjective evaluations and are operating primarily on a policy setting level (rather than an implimentation or technical level).

5.1. Determining Objectives. The first step in setting up the audit system is to determine the over-all objectives of the organization. Note that the organization may have more than one objective. The range of objectives will depend on the organization, but they might include profit, rate of return, number of clients (customers), sales, services provided, etc.

5.2. Activities necessary to attain Objectives. Once the objectives have been determined, the organization must decide how - in terms of specific activities - those objectives are to be met. In order to achieve a certain number of clients/customers, for example, activities such as advertising, public information programs, production levels, sales effort, etc. will be necessary. Note that one activity may contribute to many objectives.

5.3. Information necessary to Conduct Activities. After the desired activities have been determined, the information necessary to actually act must be determined. Before a production process starts, for example, it is necessary to know how to run the machinery, how much output, what quality standards, etc.

5.4. Information necessary to Control Activities. When it has been determined how a specific activity is to be performed, then the relationship of that activity to other activities must be determined to keep the

organization in a steady state. When the method of production is determined production will still depend on sales, distribution, availibility of resources, etc.

5.5. Evaluation of Success. After the objectives, activities, information for conduct of activities, and information for control have been determined, standards must be set so that the organization will be able to decide the extent to which the activities are successful.

5.51. Objectives Success. Standards are necessary to determine how well the objectives (over-all) are being met. Are the activities - from 5.2 - achieving their intended objectives -from 5.1?

5.52. Information Success. Standards are also necessary to determine the contribution of information to the conduct and control of activities.

6. Developing the Audit Plan. After objectives and activities have been determined the first step of the Information Audit comes into focus. The first step is to interview the members of the organization in order to determine what information they feel that they need to perform the activities they are responsible for.

6.1. Content. The first aspect of information sought is the content or specific data needed.

6.2. Timing. The second aspect is timing, or when the information is needed.

6.3. Media. The third aspect is media. Through what channel(s) must the information come?

6.4. Format. The final aspect is format or the general composition and style of the presentation of the information.

6.5. Source. Although source is not considered as an aspect of information, it is conceivable that there are situations in which a specific source may be needed for information (straight from the horse's mouth). However, the assumption is that, in general, the source of information will be determined by organizational structure rather than the user.

7. The Conduct Audit. This portion of the audit is intended to discover how well the information diffusion system is operating. The key question is, "Is necessary information available and being received?" And if not, "Why not?"

7.1. Content. The content audit form appears in Figure 2. The form compares content (data) available to the system with the content needed by the system with the content actually received by the person/user in the system. This person is the criteria for need and reception, availibility is determined by the auditor's research (i.e. was the content received in another part of the system?).

7.2. Timing. The timing audit form appears in Figure 3. This form compares the time when the information was available to the system with the time at which the user needed the information with the time at which the user received the information (if ever).

7.3. Media. The media audit form appears in Figure 4. This form compares the media available to transmit the information with the media needed by the user (or desired by the user) with the medium (media) through which the information was received.

7.4. Format. The format audit form appears in Figure 5. This form compares the formats available to the system with the format needed by

Figure 2.

CONTENT AUDIT FORM

USE OF INFORMATION	A. Content Available	B. Content Desired	C. Content Received	Variance A-B	Variance B-C	Variance A-C
to make decision(s)						
to conduct activity(ies)						
to control activity(ies)						
to teach						
to inform						
to motivate						
to persuade						
to socialize/entertain						

Figure 3.

TIMING AUDIT FORM

USE OF INFORMATION	A. When Available	B. When Desired	C. When Received	Variance A-B	Variance B-C	Variance A-C
to make decision(s)						
to conduct activity(ies)						
to control activity(ies)						
to teach						
to inform						
to motivate						
to persuade						
to socialize/entertain						

Figure 4.

MEDIA AUDIT FORM

USE OF INFORMATION	A. Media Available	B. Media Desired	C. Media Received	Variance A-B	Variance B-C	Variance A-C
to make decision(s)						
to conduct activity(ies)						
to control activity(ies)						
to teach						
to inform						
to motivate						
to persuade						
to socialize/entertain						

Figure 5.

FORMAT AUDIT FORM

USE OF INFORMATION	A. Formats Available	B. Formats Desired	C. Format Received	Variance A-B	Variance B-C	Variance A-C
to make decision(s)						
to conduct activity(ies)						
to control activity(ies)						
to teach						
to inform						
to motivate						
to persuade						
to socialize/entertain						

the user with the format received by the user.

8. The Control Audit. For the purposes of this paper I have chosen criteria representative of the types of criteria likely to be chosen by the organization conducting the audit. These criteria are arbitrary to the extent that the actual criteria employed in an audit of an internal information diffussion system would be set by the specific organization.

8.1. Efficiency Criteria. As the name suggests these are the criteria for determining how efficient (in a technical sense) the diffusion system is.

8.11. Cost. The cost criterion compares the expected or planned cost of disseminating certain information with the actual costs of the dissemination. Cost would be measured in dollars and cents.

8.12. Time. The time criterion compares the amount of time expected or planned for the distribution of certain information with the actual amount of time that the distribution takes. Elapsed time would be measured in days, hours, and minutes.

8.13. Accuracy. The accuracy criterion compares the minimal number of acceptable errors in content with the actual number of errors. This would be measured in terms of number of errors.

8.14. Intelligibility. The intelligibility criterion compares the intended level of difficulty of a message with the actual level of difficulty. Intelligibility would be measured in terms of audience level (education, experience, etc.) and/or audience comprehension of the message.

8.2. Effectiveness Criteria. These criteria are intended to determine how effective the information diffusion system is in providing the information

that the users feel they need.

8.21. Receiver/User. This criterion compares the intended receiver(s) of certain information with the actual receivers. The concern is both that those who should get information get it, and that others might get it (whether or not these others ought to have the information would be a decision left to the organization).

8.22. Content. The content criterion compares the data intended to be transmitted with the data actually received (according to receivers).

8.23. Timing. The timing criterion compares the time at which information is needed with the time at which it is received.

8.24. Media. This criterion compares the media used to transmit some amount of information with the media through which the information is received (the plural word 'media' is used because information is generally transmitted in an organization through a combination of media).

8.25. Format. The format criterion compares the format in which the information was sent with the format in which the information was received.

8.26. Source. The source criterion compares the intended or responsible source of certain information with the actual source. The control audit form appears in Figure 6.

9. Over-all Evaluation. The plan for an internal information diffusion system audit as presented is admittedly vague in some areas. Only the application of the plan to specific organization (or organizations) would be likely to reduce this vagueness.

9.1. Information Uses. The uses of information are activities including decision making, conducting activities, controlling activities,

Figure 6.

CONTROL AUDIT FORM

Efficiency Criteria		Variance
Cost-Planned	vs. Cost-Actual	above, below planned cost
Time-Planned	vs. Time-Actual	received before/after intended time of receipt
Accuracy-Planned	vs. Accuracy-Actual	number of errors more/less than acceptable
Intelligibility-Planned	vs. Intelligibility-Actual	understanding level above/below desired

Effectiveness Criteria		
Receivers	1. Did all intended receivers get the data?	2. Did any unintended receiver get data?
Content	1. Was all necessary data transmitted?	2. Was any unnecessary data transmitted?
Timing	1. Was data available when needed?	2. How long was data stored before use?
Media	1. Through what media were data received?	2. Were more efficient media available?
Format	1. In what format was data received?	2. Were more efficient formats available?
Source	1. Who was the immediate source of the data?	2. Were more credible sources available?

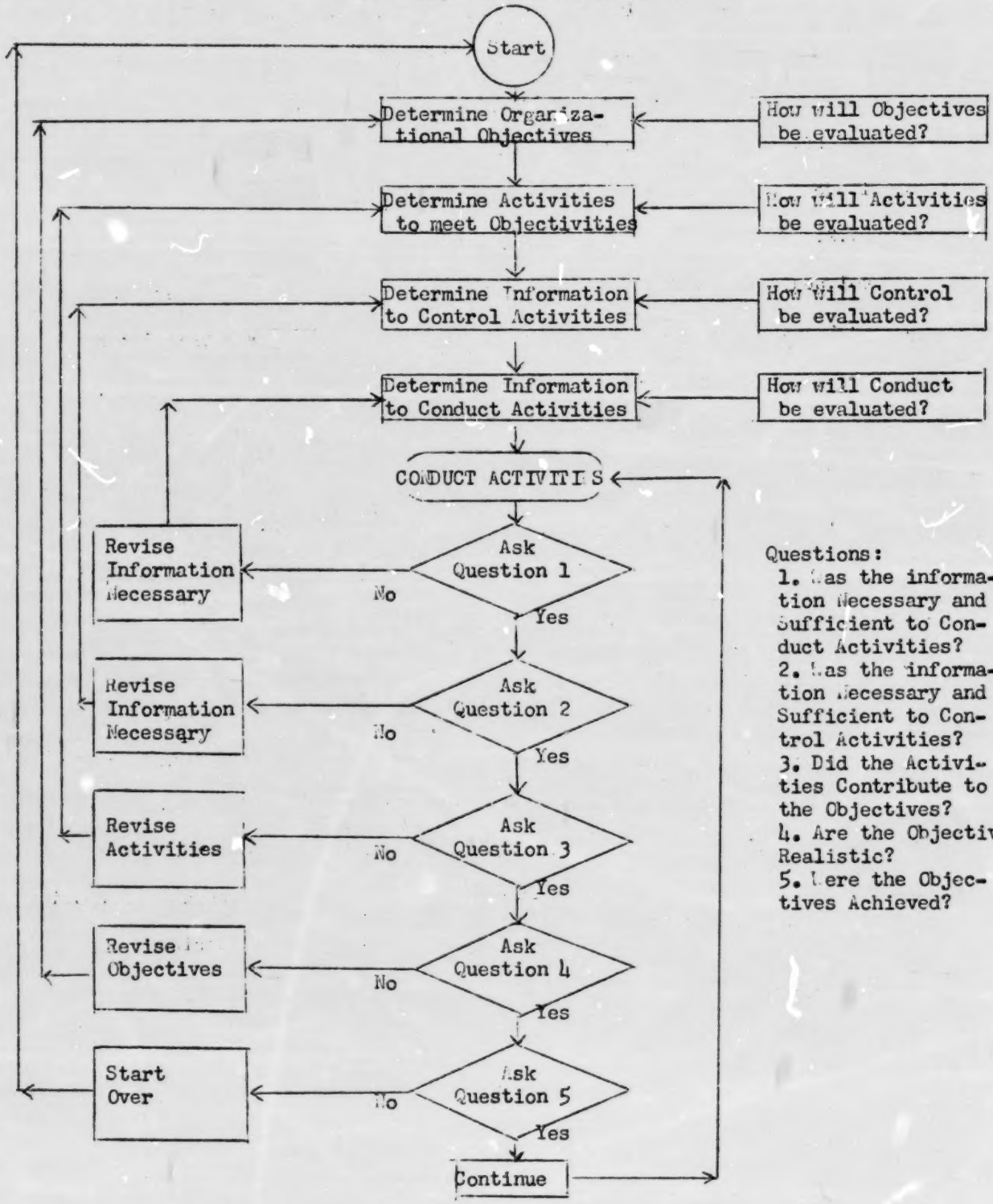
teaching, informing, motivating, persuading, and socializing or entertaining. Since the evaluation of any of these activities must be made by and in terms of the person performing the activity, there is a great potential for bias. This might be especially true in view of the human tendency to take credit for success and try to shift the blame for failure.

9.2. Interpretation. The variances developed in the conduct and control audits must be interpreted, but at this point in time these interpretations are wide open. Since there is no pattern of tradition for the interpretation of the variances, I am uncertain how others would interpret them. Moreover, I am not certain that I want to set down rules or even conventions for interpreting the variances for fear of including misleading interpretations or excluding very useful interpretations.

9.3. Re-assessment. Although not specifically stated the audit plan represents a continuous process of re-assessment. The criteria for evaluation, the information needs, the information generated or found, the activities, and the objectives must constantly be re-evaluated for their contribution to the organization. The program for this re-assessment appears in Figure 7. But the process of continual re-assessment is inconsistent with the stability promogated by many bureaucratic organizations. Thus, the organizations most likely to need revisions of their internal information diffusion systems are also the organizations most likely to resist the audit plan.

Figure 7.

FLOW CHART FOR THE AUDIT PLAN



Reference

Harold D. Lasswell, "The Structure and Function of Communications in Society," in Lyman Bryson (ed.) The Communication of Ideas (New York, Harper and Brothers, 1948).

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